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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/729,587

12/06/2003

Timothy M. Shively

P477

1576

7590 08/08/2007  
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EXAMINER

KRUER, KEVIN R

ART UNIT

PAPER NUMBER

1773

MAIL DATE

DELIVERY MODE

08/08/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/729,587

**Applicant(s)**

SHIVELY ET AL.

**Examiner**

Kevin R. Krueger

**Art Unit**

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4,7,10-13 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,7,10-13 and 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 7, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/68360 (herein referred to as Valinski) in view of Levchik et al (US 6,569,928).

Valinski teaches a sunshade comprising first and second PET layers (Figure 4), herein relied upon to read on the claimed "two polymeric film layers." The second base layer may have a light reflecting metal layer provided on the inside surface thereon which partly transmits visible light (page 11, lines 5+). Said light reflecting layer (herein relied upon to read on the claimed "metallized layer") comprises an aluminum layer and transmits 50% or less visible light (example 4 and page 4, lines 5+). Said teaching is herein understood to be sufficiently specific to anticipate the claimed light transmittance in claims 2 and 3. The light-reflecting layer is adhered to the surface of the transparent substrate with an adhesive (see Figures). The second base layer may be provided with a protective layer (Figure 4) that is herein relied upon to read on the claimed scratch resistant coating of claim 10. The PET layers may comprise UV light absorbers (page 11, lines 12+) herein relied upon to read on the claimed UV absorbing material. The

Art Unit: 1773

layers of said window shade may be adhered via an adhesive that comprises 1-5pbw tetrabromobisphenol-A fire retardant in a thermoset polyester urethane composition (abstract). The structure has a haze of less than 25% (page 7, lines 5+). The dried adhesive may comprise 2-15wt% fire retardant (see example 1). The examiner notes " which side faces the sun in use does not distinguish the claimed laminate from the laminate taught in Valinski.

Valinski does not teach that the polyester layers should comprise a fire retardant. However, Levchik teaches that resorcinol bis(diphenyl phosphate) may be added to polyester compositions in order to improve the fire retardency thereof (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add resorcinol bis(diphenyl phosphate) to the PET layers taught in Valinski. The motivation for doing so would have been to improve the sunshade's fire retardance to meet the desired standard, such as that of the German test method DIN 4102:B2.

Valinski also does not teach that resorcinol bis(diphenyl phosphate) may be utilized in the polyester urethane adhesive. However, Levchik teaches that resorcinol bis(diphenyl phosphate) may be added to polyester compositions in order to improve the fire retardency thereof (abstract). The benefit of utilizing said fire retardant is they do not migrate to the surface (see Background of the invention). Furthermore, resorcinol bis(diphenyl phosphate) is also known in the art not to migrate to the surface of urethane compositions (see WO96/06885 page 5, lines 10+). Thus, it would have been obvious to utilize resorcinol bis(diphenyl phosphate) fire retardant rather than

Art Unit: 1773

tetrabromobisphenol-A fire retardant in the thermoset polyester urethane composition taught in Valinski. The motivation for doing so would have been that said phosphate fire retardant is more environmentally friendly. Furthermore, it would have been obvious to one of ordinary skill in the art to vary the amount of fire retardant added in order to optimize the clarity and fire resistance of the composite.

3. Claims 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/68360 (herein referred to as Valinski) in view of Levchik et al (US 6,569,928), as applied to claims above, and further in view of Fuchs et al (US 5,740,649).

Valinski in view of Levchik is relied upon as above, but does not teach that the sunshade may be perforated. However, Fuchs teaches that it is known in the art to make a foil "sound permeable" by making a multiplicity of small holes/perforations therein (col 5, lines 18+). The perforations may be spaced 1.2mm from each other (col 7, line 47). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to put micro-perforations into the sunshade taught in Valinski at a spacing of 1.2mm. The motivation for doing so would have been to make the sunshade sound absorbing.

4. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/68360 (herein referred to as Valinski) in view of Levchik et al (US 6,569,928), as applied to claims above, and further in view of Jablonka et al (US 4,555,433).

Valinski in view of Levchik is relied upon as above, but does not teach that the sunshade should be formed with a plurality of adjacent cup shaped recesses arranged

Art Unit: 1773

in the form of a grid. However, Jablonka teaches that forming a element with a plurality of adjacent cup shaped recesses arranged in the form of a grid makes said material sound deadening (abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the sunshade taught in Valinski with a plurality of adjacent cup shaped recesses arranged in the form of a grid. The motivation for doing so would have been to provide said sunshade with sound deadening properties.

### ***Response to Arguments***

Applicant's arguments filed May 22, 2007 have been fully considered but they are not persuasive.

Applicant argues Valinski does not recognize the problems associated with aging of polymeric coatings or layers containing FR materials. However, applicant has failed to demonstrate any unexpected results with respect to the aging of layers containing FR materials. Applicant argues that by placing a FR layer on the exterior of the laminate, Valinski teaches away from a laminate meeting the claimed aging and FR requirements. Said argument is noted but is not persuasive because applicant is not comparing the closest embodiment of Valinski to the claimed invention. Specifically, said coating 2 of Valinski is taught to be optional and said coating is not part of the closest embodiment taught in Valinski.

Applicant further argues that Valinski is totally silent on the relative position of the FR coating and the PET layers containing UVA. Said argument is noted but does not appear to be commensurate in scope with the claims. Specifically, the claim allows for

Art Unit: 1773

either of the PET layers to comprise a fire retardant material. Thus, it is not clear what "relative position" applicant is arguing is critical to the claimed invention. Furthermore, the examiner notes Valinski teaches a UV absorber in a film layer arranged outwardly of the fire retardant containing adhesive.

With respect to Levchick, Applicant argues the reference teaches the use of RDP in polyester compositions containing high charring polymers but does not teach PET compositions containing said fire retardant. The examiner respectfully disagrees. Levchick teaches the composition may comprise a PET (col 2, lines 42+). Furthermore, the examiner notes the cited art incorporated by reference into Levchick teaches the RDP fire retardant utilized in PET compositions (col 2, lines 60+). Thus, the reference clearly contains the teachings for which the examiner relied upon it: the use of RDP as a fire retardant in PET compositions.

Applicant's arguments with respect to Blundell have been fully considered. In further support of the examiner's position, applicant's attention is directed to US 5,665,801 (col 1, line 53) which teaches RDP is known to have low migration.

Applicant argues the claimed composition comprising two PET layers adhered together by a polyurethane adhesive containing RDP fire retardant was not known. The examiner acknowledges the prior art does not anticipate the claimed composite, but maintains the claimed composite is rendered obvious by the prior art for reasons of record.

Applicant argues the prior art fails to teach or render obvious the claimed composite meeting the claimed FR requirements, that has low haze, and has good

Art Unit: 1773

resistance to aging. It is acknowledged that the prior art fails to anticipate said composite, but the examiner maintains the skilled artisan would have been motivated to make said invention in view of the cited art. Specifically, the skilled artisan would have expected the aging resistance of the composite to improve if the optional UV absorbers were included in the composite taught in Valinski. Furthermore, the skilled artisan would have known how to achieve a composite meeting the claimed FR requirements given the prior art. Specifically, the prior art teaches which FR additives made be added to the compositions taught in Valinski and how to balance haze and fire retardance (Pengilly). Applicant argues Pengilly would have taught the use of bromine based FR material and fails to disclose an embodiment in which the claimed FR and low haze requirements are met. Said argument is noted but is not persuasive. Pengilly acknowledges FR increases as fire retardant additives are added to a composition, but haze is increased with increasing amounts of additive. Thus, Pengilly provides ample teaching to allow the skilled artisan to select the type and amount of FR additive in order to obtain a composite meeting the desired FR and haze requirements.

In support of their position, applicant has filed a declaration by Anthony Brian Port. Mr. Port argues the composite of Valinski did not pass the claimed FR requirements and aged very badly in sunlight. In support of said argument, the composite of Figure 6 of Valinski was tested. Mr. Port argues said sample failed the B2 standard and suffered from poor longevity on exposure testing-demonstrating a color change approximately 15 times greater than the present invention. Said data has been fully considered but it is not persuasive because it is not clear which samples were



Art Unit: 1773

comparative examples and which were inventive examples. Furthermore, it is not clear what layers and compositions each of the samples comprised. Applicant is requested to more fully explain the test results as they relate to applicant's unexpected results arguments.

Mr. Port also argues that Valinski failed to understand the positional relationship between the PET layer containing UVA and the FR coating layer. However, it is not clear from the declaration what the critical "positional relationship" is. It is also not clear if said "positional relationship" is claimed in independent claim 1. Applicant is requested to clarify what is meant by "positional relationship," show said positional relationship is explicitly or inherently claimed in independent claim 1, and explain how the declaration demonstrates said feature is critical to the claimed invention,

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1773

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'K R K', is positioned above the printed name of the examiner.

Kevin R. Kruer  
Patent Examiner-Art Unit 1773